

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

THE SUPERINTENDENT

Copy from

FILE 143

M O N T H L Y   R E P O R T

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S e p t e m b e r ,

1919.

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DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
YELLOWSTONE NATIONAL PARK  
YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

October 10, 1919.

The Director,  
National Park Service,  
Washington, D. C.

Sir:

The following is my report on conditions in Yellowstone National Park and on the operation of the park for the month of September, 1919:

GENERAL CONDITIONS:

Rain fell in quantities on eleven different days well distributed throughout the month. The total precipitation was equal to 2.51 inches of water. In this is included 7.9 inches of snow reduced to water. The total is 1.5, or about double, the average precipitation for the month of September, based on a record of thirty years, and only one September during the thirty years, when 2.85 inches of moisture were recorded, was this record exceeded. The snowfall of 7.9 inches beat the September record for 30 years. Following a period of three months with scarcely any rain whatever with a consequent epidemic of forest fires of considerable size, this rain and snow were most welcome. But it came too late to mend much of the damage done to the winter range for stock and wild animals, though the grass in the mountains did revive to some extent. A copy of the monthly Meteorological Summary is inclosed herewith.

Travel.

The heavy travel of the previous months kept up well during September. The season for rail tourists closed on September 20, and hotels, permanent camps, the bath-house at Upper Basin, and the picture shops, closed on that date. The general stores at Mammoth Hot Springs and Upper Geyser Basin remained open throughout the month, to accommodate private automobile travel, which continued to the end of September. The tables on page give details of travel for the month and for the season, which are most interesting. The total of is beyond any prediction, and beats any previous year's travel (51,895 in 1915) by about per cent. A notable fact in connection with private automobile travel is that of about 40,000 coming to the

park in their own cars, about 25 per cent were from the State of Montana.

The roads in the park remained in good condition to the end of the season, and complaints in regard to them were rarely heard.

#### Labor and Supply markets.

There was no particular change in the labor conditions in and around the park. We still had difficulty in securing the services of enough men to carry on our work, and had to raise the price for common labor effective September 12, from \$3.76 to \$4.00 per day, and skilled labor in proportion, in order to keep the men we already had. We also sent agents to Salt Lake City, Utah, and Missoula, Montana, to get men, and they were none too successful. The concessioners encountered the same difficulties, though in their cases it was not so important to hold the help, as they were prepared to begin to lay them off as travel gradually dwindled towards the end of the season.

But about October 1st it was decided to discontinue our various lines of work in the field as rapidly as transportation facilities would permit, as labor is high and expensive, the weather is uncertain, making the cost of construction and maintenance work higher in proportion, and we found our funds getting low and it is desirable to hold some for necessary winter work and for opening the roads in the spring before the season begins and before the next year's appropriation will become available.

## II. PERSONNEL:

### Employees.

On September 1st there were 331 employees on our rolls; on September 30th there were 288. Below is given a list of the numbers of various classes of employees serving under appointment, with general statement of the kind of work performed by each class:

<u>No.</u>	<u>Class.</u>	<u>Kind of work performed.</u>
1	Foreman	In charge of all engineering work in the park under direction of the Superintendent.
2	Assistant Engineers	In charge of section of road work.
1	Assistant Engineer	Office engineering and special survey work.
7	Clerks	1 Disbursing agent and purchasing clerk; 1 on vouchers; 1 on orders and proposals; 1 on information and general clerical work; (1st to 15th) stenographer, files and revenues; (16th to 30th) 1 stenographer, files, and revenues; (1st to 16th) 1 on payrolls and timekeeping; 1 cost clerk in charge of storehouse.
3	Electricians	1 in charge of power plant; 2 assistants in power plant.
1	Buffalo Herder	Work with tame buffalo herd.
1	Buffalo Keeper	In charge of tame buffalo herd.
9	Foremen	8 in charge of road maintenance crews, and 1 stable foreman.
1	Handyman	Work in commissary, rationing crews, etc.
1	Lineman	In charge of telephone system. Did emergency work and installed instruments.
1	Watchman	Night watchman at Headquarters.
1	Master Mechanic	In charge of shops.
2	Mechanics	One in charge of auto and truck repair shop; 1 repairing and driving trucks.
1	Plumber	In charge of general plumbing at headquarters.

<u>No.</u>	<u>Class.</u>	<u>Kind of work performed.</u>
1	Telegraph operator	Telegraph operator and general office work.
2	Telephone operators	Telephone switchboard operators.
1	Steward & Mstr. Trans.	In charge of Transportation.
1	Auto mechanic	Repairing motorcycles.
1	Chauffeur	Driving trucks.
1	Gas engineman	Driving caterpillar tractor.
4	Asst. Chief Rangers	One Acting Chief Ranger, in charge of ranger force; 1 in charge of ranger work in southern section; 1 in charge of ranger work in western section; 1 on long patrols throughout the park.
49	Park rangers	In charge of different stations; on duty in Chief Ranger's Office; fire patrols and fighting fire; motorcycle patrols; checking automobiles; assisting rangers in charge of stations.

Some of these employees were carried only a portion of the month. Most of the summer rangers employed temporarily for the tourist season only were laid off about the middle of September.

In addition to regular employees mentioned above, the following list of temporary laborers, truck drivers, etc., were employed:

	<u>On Sept. 1.</u>	<u>On Sept. 30.</u>
Truck drivers	12	10
Laborers	137	128
Teamsters	44	39
Special laborers	29	26
Carpenters	3	5
Cooks	12	12
Waiters	6	6
Painters	<u>1</u>	<u>1</u>
	<u>244</u>	<u>227</u>



### Leaves of Absence.

During September annual leave was granted as follows:

James McBride, Assistant Chief Ranger, September 8 to 9, inclusive; 2 days.

Alexander C. Wiley, Clerk, September 17 to 24, inclusive; 7 days.

Laurence Mazzanovich, Park Ranger, September 23 to 27, inclusive; 5 days.

William J. O'Loughlin, Blacksmith, September 24 to 27, inclusive; 4 days.

Walden H. Pendell, Clerk, September 30 (noon) to 30, inclusive;  $\frac{1}{2}$  day.

George Wimm, Park Ranger, September 20 to 29, inclusive; 8 days.

F. J. Townsend, Park Ranger, September 20 to 30, inclusive; 9 days.

### Appointments and Promotions.

The following appointments became effective during the month of September:

John L. Cooper, auto mechanic, \$120 per month, effective Sept. 1.		
Edward W. McLennan, chauffeur, \$1080 per annum,	"	" 9.
August C. Neumann, painter, \$100 per month,	"	" 12.
George E. Owen, park ranger, \$1200 per annum,	"	" 16.
Bert S. Reese, park ranger, \$1200 per annum,	"	" 1.
Dorsey R. Sherman, gas engineman, \$100 per month,	"	" 9.

### Resignations.

The following resignations took effect during September:

Alexander C. Wiley, Clerk, effective close of Sept. 24, 1919.

Laurence Mazzanovich, park ranger, close of Sept. 27, 1919.

### Vacancies.

The following vacancies existed at the close of the month:

- 1 Chief Ranger.
- 1 Assistant Buffalo Herder.

(It is not advisable to appoint a chief ranger at this time. Ample opportunity should be given the ranger force to demonstrate their fitness for this position, as it is highly desirable to fill it by promotion, if possible. To fill this place from outside would be detrimental to the morale of the force.

### III. WORK COMPLETED:

#### (a) Construction of Physical Improvements.

Construction work during the past month has progressed quite rapidly, and all crews have been confined to this class of work. The contractor for the under-pass bridge near Sylvan Pass has the work 60 per cent completed.

A small crew of men with pack train, under Assistant Chief Ranger Harry Trischman, left Headquarters on September 10 to construct and repair snowshoe cabins for use of winter patrols. Extensive repairs were made to the cabins at Miller Creek and at Cold Creek, and a new cabin was built to take the place of the old one on Pelican Creek.

A similar crew under Assistant Chief Ranger Brooks, assisted by Ranger Henry Anderson, built a new snowshoe cabin, or rest station, at Aster Creek, 12 miles south of Thumb Station. This is a cabin that will be used often by rangers passing back and forth between Snake River and Thumb Station, and therefore was built substantially. It consists of peeled logs for walls, shingled roof, floor of one inch boards, inside dimensions 14 x 16 feet, two windows each 30 x 32 inches, and one door. The logs are chinked inside and plastered with cement outside in the cracks. The windows and door are doubly protected by heavy wooden shutters to keep bears from breaking in. The work was finished on October 4.

(b) Maintenance and Repair of Physical Improvements.

Sprinkling was discontinued on September 4th, and on the 5th and 6th they pulled drags over the roads, after the rains of September 5th. These sprinkling crews were then transferred to crews making road improvements. All maintenance work of filling chuck holes and ruts was discontinued on the 6th, and all efforts were directed towards improvements.

At Headquarters practically no improvements were made. One team and two men worked 16 days clearing brush off the formation. All other help available was sent out to the park as replacements for the road crews. The 1-1/4 miles of graveling at Norris, on the Mammoth to Norris Road, is 90 per cent completed.

In the south forest reserve a small bridge crew repaired the concrete floor on the Snake River bridge, 2-1/2 miles south of the park boundary. This work was completed September 5th, and the crew moved to the Fishing Bridge, at the Yellowstone Lake outlet.

The road crew camped at Pilgrim Creek has improved 3-1/2 miles of road and the approaches to the Pilgrim Creek bridge.

Artist Point road was improved; the sharp turns were removed and both approaches to the Chittenden bridge were improved. Material taken from the west approach to improve the sharp turn, was placed on the east approach to widen it.

On the Dunraven Pass road two concrete culverts 4 x 42 feet long were constructed, and 4 culverts 2'3" x 4' were extended 14 feet. There were 120 lineal feet of 18" galvanized iron culverts laid, and 180 feet of 24" galvanized iron culverts replaced old wooden culverts. Two miles of widening were completed and two small fills made over the two concrete culverts constructed.

A crew of 12 men made the fill over Geode Creek culvert on the Tower Falls to Mammoth road.

In the east forest reserve a crew of 16 men rebuilt the 30' span Gunbarrel bridge, and completed the 60' of cribbing at Holm Lodge. Two miles of light road improvement was made. This crew was called in on September 24.

The fishing bridge at the Yellowstone Lake outlet has 40 piles driven of the 72 to drive.



The Yellowstone Lake survey is 80 per cent completed. The Inspiration Point road was surveyed and the proposed change at the Lake hotel was surveyed.

One and one-half miles of graveling was completed on the Norris to Mammoth road.

September 12 to 18 a small crew with pack train cleared out fallen timber and repaired the DeLacy Creek trail 14 miles.

(c) Miscellaneous Improvement Work.

A hay crew at Gardiner have been engaged since September 8th in cutting, curing and stacking the oat hay on the field near the park entrance. This work has progressed but slowly, due to the inclement weather.

Another small crew with pack train made heavy repairs to the telephone line from Swan Lake Flats to the Gallatin Road, 5 miles from Gallatin Station. Most of the poles, which had about rotted off, were reset over this stretch of 23 miles.

The crew on Slough Creek finished putting up hay there for use of the surplus horses for the winter, and for feeding elk. A total of 250 tons were put in stack.

A crew at the buffalo farm continued the work begun earlier in the summer, of rebuilding the fences around the meadows and the corrals, chute and squeeze for handling the buffalo. About 3-1/4 miles of pasture fence was rebuilt.

A surveyor, with three men to assist, was engaged throughout the entire month in making a preliminary survey of Yellowstone Lake. This work was 80 per cent completed. The crew was recalled on account of bad weather on October 1st, and the surveyor is engaged in working up his report in the office.

Annual estimates, to cover all activities proposed for the fiscal year 1921, were prepared and transmitted to the Service.

(d) Service to the Public.

Travel figures for the month of September, and for September 1917 and 1918, are shown for comparison in the following tables:

# TRAVEL FOR THE MONTH OF SEPTEMBER.

	1919			1918			1917		
	Vt. Transp.	Visitors	Total	Vt. Transp.	Visitors	Total	Vt. Transp.	Visitors	Total
	Arms	Arms	Arms	Arms	Arms	Arms	Arms	Arms	Arms
NORTH,.....	317	1170	1570	154	395	549	171	765	936
EAST,.....	206	747	953	141	568	709	180	640	820
SOUTH,.....	212	727	939	101	302	403	127	425	552
TOTALS,...	735	2644	3379	396	1265	1661	478	1830	2308
NORTH,.....	1406	1747	3153	1011	1576	2587	1083	1710	2793
EAST,.....	3732	1361	5093	1586	7569	9155	1263	3050	4313
SOUTH,.....	2630	1340	3970	1117	415	1532	1347	511	1858
TOTALS,...	7768	4448	12216	3714	8560	12274	3693	2271	5964

NAME OF STATE	NORTH	WEST	EAST	SOUTH	TOTAL
Arkansas	0	0	0	1	1
Arizona	2	0	0	0	2
Colorado	0	2	17	2	21
California	16	15	7	0	38
Connecticut	0	0	1	0	1
Florida	3	0	0	0	3
Georgia	0	0	1	0	1
Illinois	13	1	12	0	26
Indiana	6	0	5	0	11
Iowa	21	2	14	0	37
Idaho	4	36	0	9	49
Kansas	3	7	14	0	24
Kentucky	0	0	1	0	1
Montana	90	47	15	0	152
Massachusetts	1	0	1	0	2
Maine	0	1	0	0	1
Michigan	10	0	5	1	16
Missouri	0	3	10	0	13
Minnesota	17	0	4	0	21
New York	5	1	2	0	8
New Mexico	0	0	1	0	1
New Jersey	0	0	1	0	1
Nevada	0	1	0	0	1
Nebraska	5	2	13	1	21
North Dakota	11	1	4	1	17
Oklahoma	0	2	5	1	8
Ohio	4	2	6	0	12
Oregon	10	6	3	0	19
Pennsylvania	2	0	3	0	5
South Dakota	15	0	5	1	21
Texas	0	3	5	0	8
Utah	0	22	0	1	23
Virginia	0	0	2	0	2
Washington	18	8	5	0	31
Wisconsin	11	2	4	0	17
Wyoming	4	4	36	10	54
West Virginia	0	0	1	0	1
Canada	4	0	0	0	4
New Hampshire	1	0	1	0	2
TOTALS:	276	168	204	28	676

Copies of Chief Ranger's Travel Reports, for use in making comparisons, are inclosed herewith.

#### IV. WORK IN PROGRESS:

Construction, general maintenance and repair work, as indicated under Division III.

Preparation of annual reports covering the fiscal year 1919 and the parkseason of 1919, is in progress.

#### V. WORK BEGUN:

The only work begun during the month of any special importance is as shown under Division III, the most important being the extensive repairs to snowshoe cabins, and building of new ones where necessary. Preparations were also made to build a log cabin and a log barn on Slough Creek, where hay has been put up to winter surplus horses and to feed to elk, as it will be necessary to keep a man with the herd all winter to feed them and the elk.

#### VI. PLANS OR PROPOSED WORK:

Due to the fact that funds for new work are about exhausted, and there are only enough for current expenses and necessary work, incident to opening the roads and preparing for the park season next year, no work beyond the completion of some of the most necessary work in progress will be attempted.

#### VII. POLICIES:

No absolutely new policies have been adopted, but the policy of permitting dogs in the park under any conditions, and permitting hunting parties to pass through over trails, has been thoroughly discussed from all angles, and orders issued tending to limit these practices to the least possible, necessary to prevent extreme inconvenience, or actual hardship.

#### VIII. COST OF OPERATION:

A statement of costs of various features is not available for submission with this report.

#### IX. OTHER MATTERS OF INTEREST:

##### Wild Animals.

The wild animals are all in fine condition. The unusual



rains and snowstorms brought them down in larger numbers than they ordinarily come in September, and elk, deer and antelope were frequently seen along the road by tourists. Alfalfa hay to the extent of about 470 tons was purchased, the price ranging from \$24 to \$26 per ton in stack near the feeding grounds, to \$32 per ton baled.. This, with about 400 tons already on hand, will be several times as much as ever before available for feeding wild animals, and it is hoped will be sufficient for their needs.

Bears frequented the hotel and camp dump grounds, and since the hotels and camps closed, and most of their food supply cut off, have become more of a nuisance than ever.

Buffalo: Nothing was seen of the wild herd during the month. The tame herd was kept on the flats on Lamar River and in the adjoining hills. Six calves were born during the month, making a total of 88 calves born this season, of which 50 were males and 38 females.

#### Fish.

Fishing was fairly good in streams and lakes away from the automobile roads, although but few take the trouble to go there. A statement was received from the Yellowstone Park Camping Company to the effect that they took a total of 2,164 pounds of fish from park waters to supply the camps. These were taken in June and July, and, of course, were inadequate to supply the full needs. A carload of Rainbow and Eastern Brook trout fry and fingerlings, furnished by the Bozeman, Montana, branch of the United States Fish Hatchery, were planted in park waters as follows:

<u>Cans.</u>	<u>No. Fish.</u>	<u>Kind of Fish.</u>	<u>Where planted.</u>
10	12,500	Rainbow	Upper Gibbon.
10	12,500	Rainbow	Lower Gibbon.
12	15,000	Rainbow	Virginia Meadows.
<u>Gardiner River Waters.</u>			
13	16,250	Rainbow	Lupine Creek.
10	15,000	Rainbow	Glen Creek.
14	17,500	Rainbow	Panthere Creek.
-----			
15	4,125	Eastern Brook	Upper Firehole River.
18	4,950	Eastern Brook	Little Firehole River.
18	4,950	Eastern Brook	Nex Perce Creek.
15	4,125	Eastern Brook	Mallard Lake.



### Arrests and Violations of the Law.

Only one arrest was made during the month, namely on September 5, Messrs. D. W. Case and R. E. Stevens were arrested by Ranger E. Matthew, for leaving their camp fire burning. They were tried before the United States Commissioner, plead guilty, and were fined \$5 each and costs.

### Forest Fires.

On September 1 fires were still burning at Mountain Ash Creek, Grizzly Peak, Shoshone Geyser Basin, Phlox Creek, and Mirror Plateau, as reported for August; but heavy rains had them practically extinguished, and the men who had been fighting them were being returned to their work on roads, telephone lines, trails, etc., as rapidly as could be done with the transportation at hand. No further trouble was given by these fires. Two fires of considerable magnitude broke out the latter part of September, namely:

One near the west line of the park 17 miles north from the western entrance on September 25. A small crew of rangers and men hired in the village of Yellowstone, Montana, for the purpose, was rushed to the scene and succeeded in getting it under good control on September 28, when a snowstorm came up and finished it in short order, after it had burned over about 200 acres of timber, which was not of much value. A careful investigation indicated that this fire was started from carelessness on the part of some men taking cattle through the park on the Gallatin County road, as the tracks of both cattle and saddle horses were found at the point where it started. The Taylor Fork Cattle Company was permitted to take 900 head of cattle through on September 19 and 20, driving them from their summer range on Madison National Forest to their winter range on West Gallatin River.

The second fire occurred on September 28, high in the mountains, not far from Fawn Pass, between Fawn Creek and the Gallatin River. It was extensive enough so it was seen from several miles away, but before the rangers who were sent to locate it arrived there, the heavy snow came on and they did not find it necessary to continue. This fire was remote from any sort of travel, and doubtless started from lightning.

### Accidents and Casualties.

No accidents were reported during the month.

### Special Visitors.

Honorable Stephen T. Mather, Director of National Parks, visited the park officially September 8 to 12, inclusive, as follows:

Arrived Cody 8th, and same evening he and I met Cody Club on Yellowstone Problems; September 9th to Lake Outlet to inspect camp improvements and proposed developments, and to Canyon for the night. September 10th to Old Faithful, via Thumb for lunch, thence to Mammoth. September 11th at Mammoth on administrative matters and estimates; met all employees in evening. September 12th, out Gardiner on evening train.

Mr. G. E. Goodwin, Civil Engineer, National Park Service, arrived on September 14th to assist in preparation of estimates of all national parks.

Mr. Charles P. Punchard, Jr., Landscape Engineer, National Park Service, was here from September 17 to 23, to take up certain landscape features in connection with improvements in the park.

Miss Elizabeth Frazier, writer for the Saturday Evening Post, spent several days, beginning September 14th, in the park, and I personally accompanied her around the park, into Jackson Hole and to the Buffalo Farm.

Doctor Nicholas Murray Butler, President of Columbia University, September 7 to 10.

Mr. Clifford C. Cassidy, Traveler, Writer, Lecturer, and author of "Home and Abroad" series, September 6 to 8.

Mr. C. J. Collins, Bureau of Service, National Parks and Monuments, Chicago, September 2 to 6, with American Express party of 50.

Mr. Frederick Oederlin, Commercial Advisor and Member of the Swiss Legation in Washington, D. C., September 3 and 4.

Mr. Harry Dibble, Project Manager, United States Reclamation Service, September 10.

Mr. E. C. Howard, from the Idaho Falls Office of the United States Geological Survey, Water Resources Branch, entered on September 5 to measure and inspect the water gauges in the park.

The Famous Players Lasky Company, of New York, finished their work in the park and departed.

Mr. E. C. Schoettner, of Butte, Montana, who holds permit dated August 19, to take moving pictures in the park, was here for a few days beginning September 5.

X. RECEIPTS AND REMITTANCES:

The usual report of monies collected, due, transmitted, etc., together with money orders and checks, totaling \$522.00, as called for in the reports on Forms 10-59 and 10-60, is inclosed. Please acknowledge receipt.

Cordially yours,

HORACE M ALBRIGHT

Superintendent.

Inclosures:

DEPARTMENT OF THE INTERIOR.  
YELLOWSTONE NATIONAL PARK.

CHIEF RANGER'S MONTHLY TRAVEL REPORT, MONTH OF

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	GARDINER.		YELLOWSTONE.		SNAKE RIVER.		SYLVAN PASS.		SODA BUTTE.		SUMMARY.	
	Cars.	People.	Cars.	People.	Cars.	People.	Cars.	People.	Cars.	People.	Cars.	People.
Permits issued.....	276	950	168	607	28	95	204	686			676	2338
Units issued (complementary) <i>Motorcycles</i>	1	2			1	1					2	3
Cars entering second time.....	40	146	38	132	16	45	7	20			101	343
Total.....	317	1098	206	739	45	141	212	708			780	2686
Passengers in horse-drawn vehicles.....												
Passengers on horseback.....		12		8		7		17				44
Passengers on bicycles.....												
Passengers on foot.....												
Total incoming passengers with private transportation WITH HIRED TRANSPORTATION.	1110		747		148		725				2730	
Howstone Park Transportation Co.	702		702				242				1646	
Licenses of personally conducted camping parties.....		66										66
Livery licenses, short trips.....												
Total incoming passengers with hired transportation	768		702				242				1712	
TOTAL INCOMING PASSENGERS	1878		1449		148		967				4442	

U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU

Weather Conditions---- Mammoth Hot Springs.

SEPTEMBER, 1919.

Temperature: Monthly mean,  $52.0^{\circ}$ , which is  $1.4^{\circ}$  below the normal for the month. Except the 21st, 27th and 28th when the temperature was unusually low for the season, only moderate fluctuations above or below the normal occurred.

Precipitation: Total, 2.51 inches, or 1.50 inches above normal. With the exception of September, 1901, when 2.85 inches were recorded, the total for this year is the greatest in thirty years' record.

Snowfall: Total for the month, 7.9 inches, which is the greatest snowfall in the September record during a period of thirty years.

Wind: The wind was generally light with a maximum velocity of 30 miles from the south on the 11th.

Sunshine: The sunshine was slightly below the average for the September, the percentage of the possible being 58.

G. E. Lawton,

EHF.

Observer.



October 11, 1919.

The Director,  
National Park Service,  
Department of the Interior,  
Washington, D. C.

Sir:

Referring to monthly report from this office  
under date of October 10, 1919:

There is transmitted herewith Chief Ranger's  
Monthly Report of Travel for the month of September,  
1919, which should have accompanied my monthly report for  
September.

Cordially yours,

FORACE M. ALBRIGHT

Superintendent.

Inclosure:

LMH

STATEMENT OF FISH PLANTED  
IN DIFFERENT WATERS OF  
YELLOWSTONE NATIONAL PARK

SEPTEMBER 3, 1919

No. Fish.	Kind of Fish.	Where Planted.
12,500	Rainbow	Upper Gibbon.
12,500	Rainbow	Lower Gibbon.
15,000	Rainbow	Virginia Meadows.
Gardiner River Waters.		
16,250	Rainbow	Lupine Creek.
15,000	Rainbow	Glen Creek.
17,500	Rainbow	Panther Creek.
88,750		
4,125	Eastern Brook	Upper Firehole River.
4,950	Eastern Brook	Little Firehole River.
4,950	Eastern Brook	Nez Perce Creek.
4,125	Eastern Brook	Mallard Lake.

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